

#### ABSTRACT

In a cleaning apparatus 500, as a pre-cleaning step, cleaning is performed in a first and a second backup cleaning bath 602 and 603 using a hydrocarbon-based cleaning liquid composed of a normal paraffin, such as normal nonane or normal decane, as a primary component and a surfactant such as a fatty acid alkanol amide or a fatty acid N-alkyl alkylene diamine, and as a post-cleaning step, immersion cleaning, shower cleaning, and vapor cleaning are performed in a cleaning bath 601 using a hydrocarbon-based cleaning liquid containing no surfactant.